

CLAIMS

1. . An adaptive equalizer comprising:

- an equalizer filter (32) for filtering a distorted signal from a communication channel, having a data
5 signal input (30) for receiving said distorted signal, a feedback signal input for a feedback control signal, and which generates an output signal at an output node (35);
 - circuitry (46) for processing said output signal
10 and generating said feedback control signal, the circuitry comprising
 - o a first means (38) for measuring a short-term-amplitude signal of said output signal,
 - o a second means (38) for measuring a long-term-amplitude signal of said output signal,
15 o a comparator means (43) that compares said short-term-amplitude signal and said long-term-amplitude signal and that determines the evolution of said feedback control signal,
- 20 arranged such that said distorted signal is compensated for its higher frequency attenuation in said communication channel.

2. An adaptive equalizer such as in claim 1, wherein the short-term-amplitude signal of the output
25 signal is indicative for the amplitude of the high-speed component of said output signal.

3. An adaptive equalizer such as in claim 1 or 2, wherein the long-term-amplitude signal is indicative for the amplitude of the output signal stripped from its
30 possible overshoot peaks.

4. An adaptive equalizer such as in any of the claims 1 to 3, wherein the short-term-amplitude signal

of the output signal is generated by a circuit comprising a high-pass filter and a peak detector.

5. An adaptive equalizer such as in any of the claims 1 to 4, wherein the long-term-amplitude signal of the output signal is generated by a circuit comprising a low-pass filter and a peak detector.

6. An adaptive equalizer such as in any of the claims 1 to 5, wherein said output signal is fed to a limiting amplifier (36) to produce a digital output signal.

10 7. A multi-stage adaptive equalizer comprising at least a first and a second adaptive equalizers such as in any of the claims 1-5, wherein the output signal of said first adaptive equaliser is fed to the data input node of said second adaptive equaliser.

15 8. A method for adaptively equalising a distorted signal comprising high frequency attenuation received from a communication channel, comprising the steps of:

- Filtering said distorted signal and providing an output signal at an output node,
- Comparing a short-term-amplitude signal of said output signal to a long-term-amplitude signal of said output signal to provide a feedback signal, and
- Providing a feedback signal to compensate said high frequency attenuation in said distorted signal.

9. The method as in claim 8, wherein the short-term-amplitude signal of the output signal is indicative for the amplitude of the high-speed component of the output signal.

30 10. The method as in claim 8 or 9, wherein the long-term-amplitude signal is indicative for the amplitude of the output signal stripped from its possible overshoot peaks.